

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

ORDER NO. 83-37

NPDES PERMIT NO. CA0027961

WASTE DISCHARGE REQUIREMENTS FOR:

INTERNATIONAL BUSINESS MACHINES CORP.  
SAN JOSE  
SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board) finds that:

1. International Business Machines Corporation (hereinafter called the discharger), manufacturer of data processing equipment, located at 5600 Cottle Road, San Jose (Attachment 1), submitted an application dated July 8, 1983 for renewal of waste discharge requirements and a permit to discharge under the National Pollutant Discharge Elimination System (NPDES). The discharger is currently discharging wastes pursuant to Order No. 80-35 which was adopted by the Board on August 5, 1980.
2. The waste streams are described as follows:

<u>Discharge</u>	<u>Contributory Waste Stream</u>	<u>Annual Flow Average (MGD)</u>
001	A. Low volume waste	
	001A Air-Conditioning Condensate, Non-contact cooling water, reverse osmosis reject water	0.17
	001B-1 Storm runoff from tank farms bulk chemical/waste conveyance tunnels, and correction vaults	0.01
	001B-2 Diesel fuel storage area runoff	0.01
	001B-3 Bulk acid and caustic storage area runoff	0.01
002	B. Groundwater extracted on-site	5.8

Waste streams 001 and 002 are discharged via storm drains through a common outfall to Canoas Creek which is tributary to Guadalupe River and San Francisco Bay, all of which are waters of the State and United States (Attachment 2). Wastes 001A are covered by Order No. 80-35.

IBM proposes that the storm water runoff from the tank farms, bulk chemical/waste conveyance tunnels and collection vaults will be held, tested, and discharged only if the test results indicate the concentrations of contaminants to be within the limits adopted by the Board in this NPDES permit.

3. The discharger has reported a number of leaks from subsurface chemical storage and transmission units which involve organic solvents used in the manufacture of data processing devices. These solvents have contaminated the soil and groundwater in the facility area. Additionally, the contaminated groundwater has moved with the regional groundwater flow creating a plume of contamination which extends beyond the discharger's site boundary. The extraction and discharge of the portion of the plume extending beyond the plant site boundary will be covered by a separate Order.

The control and cleanup of the contaminated groundwater under the plant site will be accomplished by the use of pumping wells placed adjacent to the leak locations, and down gradient along the plant site boundary. The boundary wells will not require treatment initially as the plume concentration at the site boundary are low enough for direct discharge. However, conditions may change such that treatment could be required for some or all boundary extraction well discharges.

4. The Regional Board adopted a revised Water Quality Control Plan for San Francisco Bay Basin (Basin Plan) on July 21, 1982. The Plan contains water quality objectives for San Francisco Bay.
5. The beneficial uses of Canoas Creek, Guadalupe River and San Francisco Bay are:
  - a. Recreation
  - b. Fish migration and habitat
  - c. Habitat for wildlife
  - d. Esthetic enjoyment
  - e. Navigation
  - f. Estuarine habitat
6. The Santa Clara Valley Water District (SCVWD) has indicated that Canoas Creek and the Guadalupe River are not considered to be groundwater recharge streams. Their opinion is based on a review of available technical data and reports.
7. The Board has considered the currently available water quality objectives for organic constituents necessary to protect the beneficial uses listed in Finding 5. The discharge limits contained in this permit are based on the most restrictive guidelines available, which in this case are aquatic toxicity and best available technology. Due to lack of available guidelines the Board has not considered numerical limits based on precluding nuisance conditions which may occur as a result of volatilization of materials upon discharge. More stringent limits may be considered when additional information or guidelines are available.
8. This NPDES Permit is for air conditioning condensate, non-contact cooling water, reverse osmosis reject water, storm water runoff and for groundwater extraction and treatment which is a non-guideline category for industry. The prohibitions, specifications and provisions of this

Permit are based on best professional judgement in order to implement the Federal Water Pollution Control Act and the Water Quality Control Plan for the San Francisco Bay Basin. Some effluent limitations contained in this order are derived from guidelines set by State and Federal Resource agencies to provide protection for acute and chronic aquatic toxicity. They are considered the best available technology in the judgement of the Board. Limits are subject to reconsideration when more extensive or refined guidelines are established.

9. Effluent limitation and toxic effluent standards established pursuant to Sections 208(b), 301, 304 and 307 of the Federal Water Pollution Control Act and amendments thereto are applicable to the discharge.
10. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
11. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21000) of Division 13 of Public Resources Code (CEQA) in accordance with Water Code Section 13389.
12. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Clean Water Act and amendments thereto, and shall take effect immediately. If however, EPA or any interested person has submitted objections to the issuance of this permit, the permit shall take effect at the end of ten days from the date of adoption provided the EPA Regional Administrator has no formal objections.
13. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that International Business Machines Corporation, Cottle Road, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Federal Water Pollution Control Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. Effluent Limitations

1. Discharge 001A shall not contain constituents in excess of the following limits:

<u>Constituents</u>	<u>Unit</u>	<u>Maximum Daily</u>
a. Flow	gpd	190,000
b. Total Dissolved solids	mg/l	800
c. pH	-	6.5 - 8.5
d. Chlorine residual	mg/l	0.0 instantaneous maximum

- e. In any representative set of samples the waste as discharged shall meet the following limit of quality:

TOXICITY

The survival of Rainbow Trout test fish in 96 hour bioassays of the effluent shall achieve a median of 90% survival for three consecutive samples and a 90 percentile value of not less than 70% survival for 10 consecutive samples.

- 2a. Discharge 001B-1 shall not contain constituents in excess of the following limits:

<u>Constituent</u>	<u>Unit</u>	<u>Maximum Daily</u>
a. TOC	mg/l	30

- 2b. Discharge 001B-2 shall not contain constituents in excess of the following limits:

<u>Constituent</u>	<u>Unit</u>	<u>Maximum Daily</u>
a. Oil and Grease	mg/l	20

- 2c. Discharge 001-B-3 shall not contain constituents in excess of following limits:

<u>Constituent</u>	<u>Unit</u>	<u>Maximum Daily</u>
a. pH	-	6-8
b. TDS	mg/l	800

- 3a. Discharge 002 shall not contain constituents in excess of the following limits:

<u>Constituents</u>	<u>30-Day Average(mg/l)</u>	<u>Maximum Daily(mg/l)</u>
1,1,1 trichloroethane (TCA)	0.100	0.200
trichloroethylene (TCE)	0.050	0.100
tetrachloroethylene (PCE)	0.050	0.100
1,1 dichloroethylene (1,1 DCE)	0.050	0.100
1,2 dichloroethylene (1,2 DCE)	0.050	0.100
1,1 dichloroethane (1,1 DCA)	0.050	0.100
1,2 dichloroethane (1,2,DCA)	0.050	0.100
methylene chloride	0.500	1.00
Freon 113	10.0	20.0
petroleum naptha	10.0	20.0
isopropanol	50.0	50.0
acetone	50.0	50.0
chloroform	0.100	0.200
isophorone	0.100	0.100
toluene/xylene	0.100	0.100

- b. In any representative set of samples the waste as discharged shall meet the following limit of minimum quality:

## TOXICITY:

The survival of Rainbow Trout test fish in 96 hour bioassays of the effluent shall achieve a median of 90% survival for three consecutive samples and a 90 percentile value of not less than 70% survival for 10 consecutive samples.

4. The quantity of pollutants discharged from low volume wastes shall not exceed the quantity calculated from the flow of the waste sources times the concentration in mg/l in A.1.b and A.2.

## B. Receiving Water Limitations

1. The discharge of wastes shall not cause the following conditions to exist in waters of the State at any place:
  - a. Floating, suspended, or deposited macroscopic particulate matter or foam;
  - b. Bottom deposits or aquatic growths;
  - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
  - d. Visible, floating, suspended or deposited oil or other products of petroleum origin;
  - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place:
  - a. Dissolved Oxygen                      5.0 mg/l minimum. Annual median - 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
  - b. Dissolved Sulfide                      0.1 mg/l maximum.
  - c. pH    Variation from natural ambient pH by more than 0.5 pH units.
3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

C. Provisions

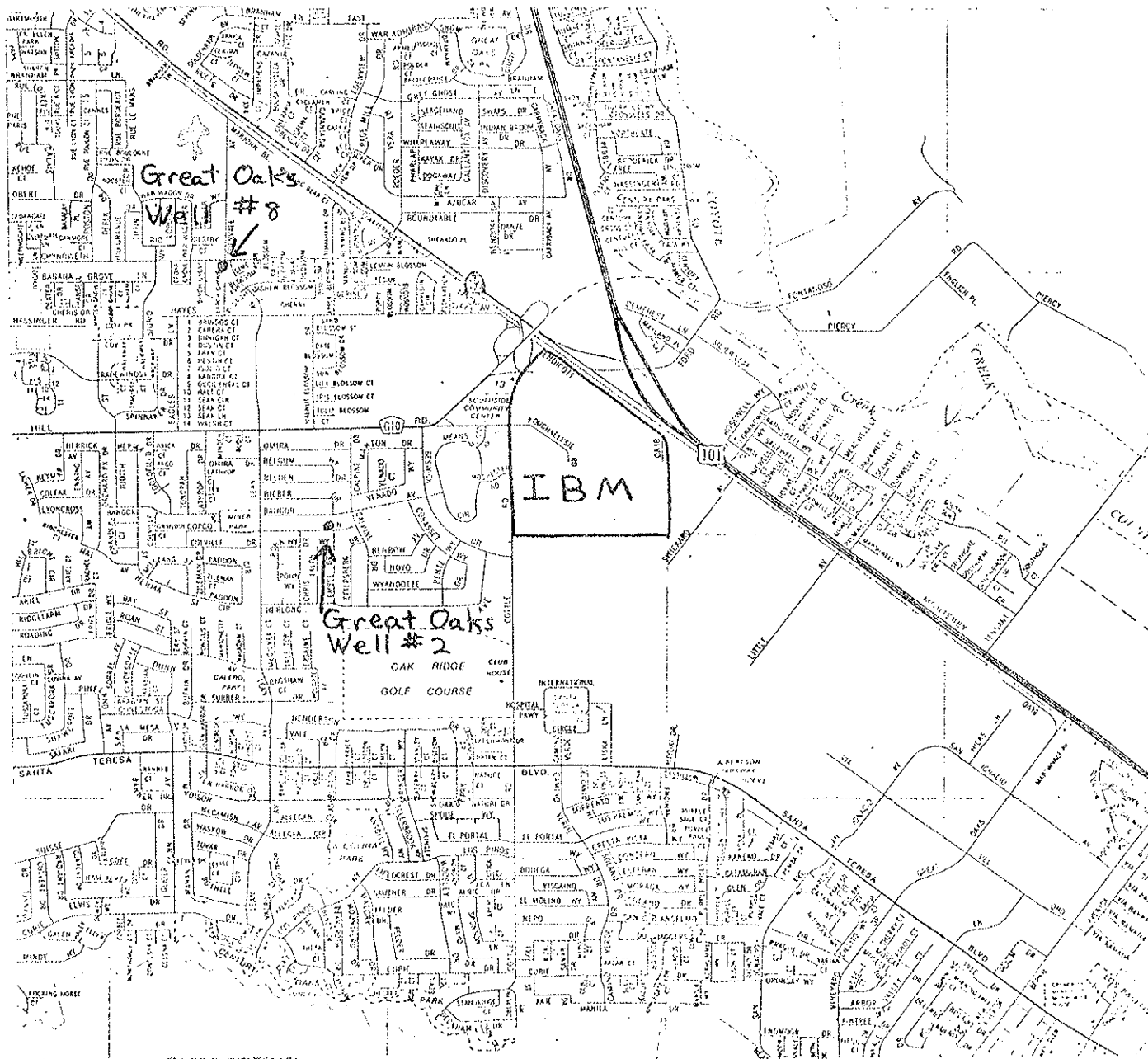
1. Neither the treatment nor the discharge of pollutants shall create a nuisance as defined in the California Water Code.
2. The discharger shall comply with all sections of this Order immediately upon the effective date of this permit as specified in Finding 12 above.
3. The discharger shall comply with the self-monitoring program to be approved by the Board and as may be amended by the Executive Officer.
4. This Order includes all items except A.5, 7, 12, 16, B.3 and B.5 of the attached "Standard Provisions", dated April 1977.
5. This Order expires on September 21, 1988, and the discharger must file a Report of Waste Discharge in accordance with Title 23, California Administrative Code, not later than 180 days in advance of such date as application for issuance of new waste discharge requirements.
6. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the discharger, the discharger shall notify the succeeding owner or operator of the existence of this Order by a letter, a copy of which shall be forwarded to this Board.
7. The Board's Order No. 80-35 is hereby rescinded.

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on September 21, 1983.

FRED H. DIERKER  
Executive Officer

Attachments:

- Standard Provisions dated 4/77
- Attachment 1 - Area Map
- Attachment 2 - Extraction Well Location Map



Attachment 1

STATE OF CALIFORNIA  
REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

IBM CORP.  
AREA MAP

DRAWN BY: PWJ DATE: 7/23/83 DRWG. NO.

LEAK  
SOURCE  
WELLS

### Extraction Well Locations